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Accelerating rate calorimetry as a method for analysing in situ combustion processes

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Abstract

© SGEM2018. This work devoted to study in situ combustion processes of different crude oil. The crude oils from different field of Russian Federation were selected. Oxidation process in reservoir conditions (50 bar and 50 °C) were studied for all crude oils. The combustion study was investigated by accelerating rate calorimetry (ARC). This method is most suitable for studying the processes of oil oxidation in reservoir conditions. Arrhenius kinetic parameters were determined for crude oils. The correlations between API gravity and activation energy of crude oils oxidation was found. Those correlations will be useful to predict behavior of crude oil oxidation processes.

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Keywords

ARC, Kinetics parameters, Oxidation

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